

Application No. 10/595,439
Preliminary Amendment dated June 5, 2006

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)
2. (Canceled)
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (Canceled)
7. (Canceled)
8. (Canceled)
9. (Canceled)
10. (Canceled)
11. (Canceled)
12. (Canceled)
13. (Canceled)
14. (Canceled)
15. (Canceled)
16. (Canceled)
17. (Canceled)
18. (Canceled)
19. (Canceled)
20. (Canceled)

Application No. 10/595,439
Preliminary Amendment dated June 5, 2006

21. (Canceled)
22. (Canceled)
23. (Canceled)
24. (Canceled)
25. (Canceled)
26. (Canceled)
27. (Canceled)
28. (Canceled)
29. (New) A method of managing information exchanges in a worksite, by networking items of apparatus which perform tasks in connection with said worksite and which receive and/or send data, the method using an electronic data network comprising management means cooperating with a plurality of communications interfaces, a given said item of apparatus having a data link with a specified said communications interface, wherein at least some said items of apparatus are organized in hierarchical levels according to a determined dependency relationship of the worksite, and in that said management means performs the method comprising the following acts:
 - storing a correspondence between each said item of apparatus organized in hierarchical levels and an address structure reflecting the hierarchical position of that item of apparatus in said determined dependency relationship of the worksite, and
 - using that correspondence to establish a communications link with a selected item of apparatus, via its communications interface, in response to a call addressed with an address structure reflecting the hierarchical position of said selected item of apparatus.

Application No. 10/595,439
Preliminary Amendment dated June 5, 2006

30. (New) Method according to claim 29, further comprising the act of accessing from outside said worksite a selected said item of apparatus through said electronic data network by using an address comprising said address structure reflecting the hierarchical position of said selected item of apparatus.
31. (New) Method according to claim 29, wherein said management means operate by converting said address into a corresponding device address for accessing said selected item of apparatus on said electronic network, and by using that device address to call the communications interface to which said selected item of apparatus has a data link.
32. (New) Method according to claim 31, wherein said address is an IP (Internet Protocol) address.
33. (New) Method according to claim 29, wherein said address structure reflecting the hierarchical position of said selected item of apparatus is expressed as a directory-path.
34. (New) Method according to claim 29, wherein said worksite is identified by a generic portion of a said address that comprises said address structure reflecting the hierarchical position of a selected item of apparatus.
35. (New) Method according to claim 29, wherein said address structure reflecting a hierarchical position of a said item of apparatus is a Uniform Resource Locator (URL), said URL

Application No. 10/595,439
Preliminary Amendment dated June 5, 2006

having a directory-path portion corresponding to said address structure reflecting the hierarchical position of said selected item of apparatus.

36. (New) Method according to claim 35, wherein said uniform resource locator includes a hostname portion that is specific to said worksite.

37. (New) Method according to claim 29, wherein said worksite is an outdoor worksite comprising any one of:

- i) a civil engineering worksite,
- ii) a landscaping worksite,
- iii) a road or rail link construction worksite, and
- iv) a mining worksite.

38. (New) Method according to claim 29, further comprising an act of converting an address structure designating an item of apparatus to be accessed in accordance with a second hierarchy, the second hierarchy being different from the hierarchy used by the management means to organize the hierarchical levels according to said determined dependency relationship, into the address in said electronic network of said designated item of apparatus.

39. (New) Method according to claim 29, further comprising an act of assigning a separate class/sub-class, in said hierarchical position relation, to items of apparatus as a function of whether they are static or mobile on the worksite.

Application No. 10/595,439
Preliminary Amendment dated June 5, 2006

40. (New) Method according to claim 39, wherein at least some items of mobile apparatus perform the act of relaying messages over said electronic network.
41. (New) Method according to claim 39, further comprising an act of determining a current position of items of mobile apparatus and the act of managing the distribution of messages within said electronic network according to the items' current position.
42. (New) Method according to claim 29, wherein a first level of class/sub-class of item of apparatus, in said hierarchical position relation, comprises mobile units, a second level of sub-class being at least one command responsive functionally within a said mobile unit.
43. (New) Method according to claim 29, further comprising an act of securing communications by providing technical means for restricting access to the network to only authorized communications interfaces.
44. (New) Method according to claim 29, further comprising an act of limiting data transmissions to between only those items of apparatus which are mutually compatible or expected to communicate with each other over said electronic network.
45. (New) Method according to claim 44, further comprising the act of providing a centralized monitoring and/or management of messages exchanged over said electronic network.

Application No. 10/595,439
Preliminary Amendment dated June 5, 2006

46. (New) Method according to claims 29, further comprising an act of providing a centralized management of static or dynamic identification allocation to the communications interfaces operating in the network.
47. (New) Method according to claim 29, further comprising an act of executing automatically a work plan programming said tasks of said items of apparatus automatically to conduct operations in said worksite, commands of said work plan designating selectively to said items of apparatus using said address structure reflecting the hierarchical position of said selected item(s) of apparatus.
48. (New) Method according to claim 29, wherein said items of apparatus communicate to each other selectively, a call being made from one item of apparatus to another using said address structure reflecting the hierarchical position of said selected item of apparatus.
49. (New) Method according to claim 29 for managing an automated worksite further comprising an act of sending commands to a contour changing apparatus and to an on-board apparatus through a defined protocol, the commands being elaborated from a predetermined model.
50. (New) Method according to claim 29 for managing an automated worksite in which physical and logical addressing of the communication interfaces is separated with a unique ID other than the IP address.

Application No. 10/595,439
Preliminary Amendment dated June 5, 2006

51. (New) Method according to claim 50, wherein the physical and logical addressing includes multiple different IP and/or unique ID addressing.

Application No. 10/395,439
Preliminary Amendment dated June 5, 2006

52. (New) A system for managing information exchanges in a worksite, comprising:

an electronic communications network connecting items of apparatus which perform tasks in connection with said worksite and which receive and/or send data, the electronic communications network comprising:

management means cooperating with a plurality of communications interfaces, a given said item of apparatus having a data link with a specified said communications interface, wherein at least some said items of apparatus are organized in hierarchical levels according to a determined dependency relationship of the worksite, said management means comprising:

means for storing a correspondence between each said item of apparatus organized in hierarchical levels and an address structure reflecting the hierarchical position of that item of apparatus in said determined dependency relationship of the worksite; and

means operating on the basis of said correspondence to establish a communications link with a selected item of apparatus, via its communications interface, in response to a call addressed with an address structure reflecting the hierarchical position of said selected item of apparatus.

53. (New) System according to claim 52, further comprising a terminal outside said worksite, operative to access a selected said item of apparatus through said electronic data network, said terminal including means for generating an address comprising said address structure reflecting the hierarchical position of said selected item of apparatus.

Application No. 10/595,439
Preliminary Amendment dated June 5, 2006

54. (New) System according to claim 52, wherein said management means comprise means for converting said address structure reflecting the hierarchical position of said selected item of apparatus into a corresponding device address for accessing said selected item of apparatus on said electronic network, and means using that device address to call the communications interface to which said selected item of apparatus has a data link.
55. (New) System according to claim 52, wherein the device address includes an IP (Internet Protocol) address.
56. (New) System according to claim 52, wherein said address structure reflecting the hierarchical position of said selected item of apparatus is expressed as a directory-path.
57. (New) System according to claim 52, wherein said worksite is identified by a generic portion of a said address that comprises said address structure reflecting the hierarchical position of a selected item of apparatus.
58. (New) System according to claim 52, wherein said address structure reflecting a hierarchical position of a said item of apparatus is a Uniform Resource Locator (URL), said URL having a directory-path portion of corresponding to said address structure reflecting the hierarchical position of said selected item of apparatus.
59. (New) System according to claim 58, wherein said URL includes a hostname portion that is specific to said worksite.